

**FOREST PLAN MONITORING
And
EVALUATION REPORT
Santa Fe National Forest
Fiscal Year 2012**

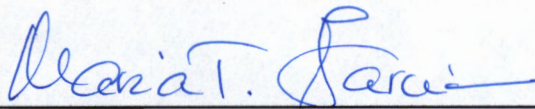
FOREST SUPERVISOR'S CERTIFICATION

The Santa Fe National Forest Plan (Forest Plan) was originally approved in July of 1987. This annual monitoring and evaluation report is based on the Monitoring Plan contained in Chapter 5 of the Forest Plan and the regulatory requirements in 36 CFR 219.11(f).

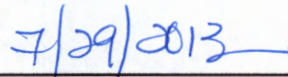
I have reviewed the annual Monitoring and Evaluation Report for the Santa Fe National Forest for fiscal year 2012.

Amendments or revisions to the Forest Plan are not likely to be made as a result of this report. Instead, information from this report will be used in the planning and design of the Santa Fe Forest Planning process.

This Monitoring and Evaluation Report meets regulatory requirements in 36 CFR 219.11(f) for completing an annual report.



Maria T. Garcia
Forest Supervisor



Date

EXECUTIVE SUMMARY

The Forest Plan Monitoring and Evaluation Report for fiscal year 2012 is written to inform the Forest Supervisor and the public of information collected on the National Forest System lands and resources of the Santa Fe National Forest, as well as progress toward achieving the goals, objectives and desired future conditions as stated in the Santa Fe National Forest Plan. Table 1. FY 2012 Monitoring Activities catalogues and summarizes the results of monitoring performed on the Santa Fe National Forest in fiscal year 2012. Chapter 5 of the Forest Plan, titled Monitoring Plan, is located on the Forest's website at <http://fs.usda.gov/santafe> and can be used for comparison with the monitoring conducted in FY 2012.

CONTENTS

Forest Supervisor's Certification

- Executive Summary

Section 1: Purpose and Relevance

- Progress toward Desired Conditions
- Forest Plan Background & Amendments
- Forest Plan Revision Schedule

Section 2: Data Collection and Assessment

- Types of Monitoring & Data Collection
- Inventories & Assessments

Section 3: FY 2012 Monitoring

- Table 1. FY 2012 Monitoring Activities Performed to meet the Santa Fe National Forest Plan Monitoring Requirements

Appendices

- Appendix 1: Santa Fe National Forest GIS Layers, April 2012
- Appendix 2: Los Posos Monitoring Report

ABBREVIATIONS, ACRONYMS AND INITIALS

| | |
|-------|--|
| BLM | Bureau of Land Management |
| BMP | Water quality best management practices |
| CCF | 100 cubic feet |
| CFRP | Collaborative Forest Restoration Program |
| FR | Forest Road |
| GIS | Geographic Information System |
| GPS | Global Positioning System |
| INFRA | Infrastructure Database for integrated inventory of and financial data for its constructed features, including buildings, dams, bridges, water systems, roads, trails, developed recreation, range facilities, administrative sites, heritage sites, and other improvements. |
| MIS | Management Indicator Species |
| NEPA | National Environmental Policy Act |
| NRIS | Natural Resource Information System |
| RD | Ranger District Office |
| RO | Southwestern Regional Office |
| SHPO | State Historic Preservation Officer |
| SO | Forest Supervisor's Office |
| TAG | Santa Fe Watershed Technical Advisory Group comprised of independent scientists and researchers |
| TES | Endangered Species Act listed/proposed Threatened & Endangered, and Forest Service Sensitive wildlife and plant species |
| TIM | Timber Information Manager |
| WFRP | Wildlife, Fish, and Rare Plants staff |
| WUI | Wildland Urban Interface |

SECTION 1 – PURPOSE AND RELEVANCE

The purpose of this annual monitoring report is to inform the Forest Supervisor and the public of the progress toward achieving the desired conditions, goals, objectives, and standards and guidelines of the Santa Fe National Forest Plan. Monitoring data gathered at the Forest and Ranger District levels is analyzed to determine whether management actions and practices are attaining or making progress toward attainment of Forest desired conditions, goals, and objectives, and if monitoring measures and methods are useful in making these determinations.

PROGRESS TOWARD DESIRED CONDITIONS

In FY2012 the Santa Fe National Forest continued to make progress toward achieving desired conditions in the following areas:

| FY 2012 | |
|--|-----------|
| Access Management | |
| Roads maintained | 286 mi. |
| Roads decommissioned | 0 mi. |
| Fire and Fuels | |
| WUI (Wildland Urban Interface) acres treated | 6,363 ac. |
| Non-WUI acres treated | 3,927 ac. |
| Heritage Resources | |
| New heritage sites inventoried | 38 Sites |
| Acres surveyed | 5,452 ac. |
| NRHP listed and eligible sites managed | 37 sites |
| NRHP listed and ineligible sites managed | 4 sites |
| Acres managed | 37,508 |
| Range Management | |
| Range vegetation improved | 1,000 ac. |
| Invasive plants (noxious weeds) treated | 10 ac. |
| Recreation | |
| Recreation sites maintained to standard | 55 |
| Campgrounds reconstructed | 0 |
| Trails maintained to standard | 135 miles |
| Trails improved to standard | 10 miles |
| PAOTS managed to standard | 250,000 |
| Wild and Scenic Rivers managed to standard | 3 |

| | |
|--|--------------|
| Soil and Water | |
| Acres of water or soil protected, maintained, or improved to achieve desired watershed conditions. | 8,469 ac. |
| Vegetation | |
| Forest vegetation improved | 1,745 ac. |
| Special forest products (latillas, vigas, posts, poles) | 1,639 ccf |
| Firewood (charge and free use) | 18,292 cords |
| Reforestation | 157 ac. |
| Christmas tree permits sold | 4,829 |
| Sawtimber sold | 1,267 ccf |
| Wildlife and Fish | |
| Terrestrial habitat improved | 6,430 ac. |
| Aquatic/riparian (stream) habitat improved | 16 mi. |

FOREST PLAN BACKGROUND & AMENDMENTS

The Forest Plan and Final Environmental Impact Statement were first published as drafts in 1982, as finals in 1983, and then were withdrawn in order to address appeal issues regarding timber harvesting and wild and scenic rivers. Once appeal issues were resolved, these documents were approved and published in final form in July of 1987.

Preliminary Forest staff recommendations for updating the Forest Plan were developed in 1996-98 and are contained in the fiscal year 1999 Monitoring & Evaluation Report. Those recommendations are still valid, although additional amendments have been made or may be necessary to incorporate evolving agency policies and direction. Following is the list of Forest Plan amendments:

- Amendment #1- Changed timber sale schedule (8/88)
- Amendment #2- Added management direction for recommended Wild and Scenic Rivers (1/89)
- Amendment #3- Changed timber sale schedule (5/89)
- Amendment #4- Added Pajarito Peak electronic site (2/90)
- Amendment #5- Adjusted management area boundaries between area "C" and "Q" (10/92)
- Amendment #6- Incorporated Region-wide amendment for managing Mexican spotted owl habitat, northern goshawk habitat, old growth and livestock grazing (5/96)
- Amendment #7- Allowed deviation from visual quality requirements for El Cajate Mine (12/96)
- Amendment #8- Modified Management Area J direction for Gallinas Municipal Watershed (10/97)
- Amendment #9- Added new management area and associated direction for managing the East Fork of Jemez Wild and Scenic River corridor (08/02)
- Amendment #10- Added new management area and associated direction for managing the Jemez National Recreation Area (01/03)

- Amendment #11- Pecos Wild and Scenic River: new standards, guidelines, Management Plan (07/03)
- Amendment #12- Managing Special Species Habitat (12/04)
- Amendment #13 – Travel Management (6/12)
- Amendment #14 – Oil and gas Leasing (12/12)

FOREST PLAN REVISION SCHEDULE

Revision of the Forest Plan will proceed according to the National Forest Management Act and other applicable regulations.

The Santa Fe National Forest is currently scheduled to initiate Revision in Fiscal Year 2014.

SECTION 2 – DATA COLLECTION AND ANALYSIS

Monitoring for the Santa Fe National Forest occurs for different purposes and at different scales. It is important for the reader to understand that many different methods of data collection occur, because this has a direct effect on how that information is conveyed, analyzed, and what it can tell us about Forest land and resource conditions.

TYPES OF MONITORING & DATA COLLECTION

There are four primary types of monitoring and data collection that are considered when monitoring under the Forest Plan. Often times, all four types of data are collected to help us plan and understand the impacts of management actions for a specific resource. The four monitoring types include the following:

Implementation Monitoring: Considers information and measurements to determine if projects and plans are implemented as designed. Most implementation monitoring occurs at the project level, and includes general information about the final results of the project.

Effectiveness Monitoring: Tells us whether or not plans, projects, or activities have results that help meet stated goals and objectives. Effectiveness monitoring is one of the key principles behind adaptive management, and is focused on the 'on-the-ground' result of a specific action. Effectiveness monitoring is the primary monitoring type used in this report.

Validation Monitoring: Helps determine if the initial data, assumptions, and parameters used in the development of the plan are correct, or if there is a better way to meet established Goals and Objectives and Desired Conditions.

Resource Condition Monitoring: Provides information that assists in the determination of existing social, ecological, and economic resource conditions and trends.

In addition to the four types of data collected, there are also two scales that can be distinguished at which data collection occurs.

Project-level Monitoring: Much of the monitoring on for the Santa Fe National Forest completed is specifically focused on project implementation. This type of monitoring often focuses on answering questions such as,

- “Has the project been completed to established standards?”
- “Have the objectives of the project been met?”
- “Was the project effective toward meeting established resource and management goals?”
- “What was the project cost?”

Much of the monitoring data is collected on a project-by-project basis. As a result, it can be difficult to extrapolate to the Forest Plan level and answer questions regarding progress toward achievement of Forest Plan desired conditions and the Forest's contribution toward achieving applicable outcomes of the Forest Service national strategic plan (36 CFR 219.12(f)(2)(i)(ii)).

Resource Monitoring: Resource monitoring is not necessarily Project-based and commonly occurs at a scale much larger than the project level. However, it may include data collection in an area as small as a short stream segment to data collection for a specific resource that occurs at a landscape or watershed scale. Inventories are a common type of resource monitoring.

These monitoring types and scales are all essential for us to understand the impacts of management activities, projects, and actions taken. Furthermore, they are essential for providing the basic understandings that enable us to work with the public to address management concerns and progress toward the agency's mission of social, economic, and ecological sustainability.

Geographical Information Systems

During fiscal year 2012, the Santa Fe National Forest Resource Information Group continued to build and update the Geographic Information System (GIS) databases and associated tabular databases for inventory and monitoring. GIS data for heritage resources, vegetation treatments, vegetation cover types and inventory plots, invasive species, fire history, roads, trails, wilderness use, dispersed and developed recreation, range allotments/pastures and improvements, and sensitive species were updated generally on a project-by-project basis or periodically.

For each of these layers, the Forest is continuously working to reduce locational error in its GIS data by incorporating GPS data and using the most current digital orthophotography available to update the data accordingly for increased precision and accuracy. The Forest received digital resource photography flown in 2010 at a scale of 15840 and orthorectified those in the Southwest Jemez Landscape Restoration CFLRP Project Area. Additionally, the Forest continues to maintain our data to meet regional and national data dictionary standards.

In February 2012, the Forest migrated all data from local servers to the Data Center and migrated corporate Forest data into ArcSDE at the Data Center.

The NRM INFRA database continued to be updated and linked with existing GIS databases including roads, trails, developed recreation sites, administrative sites, and range features. Inventory continued on deferred maintenance inspections and costs for those items listed in the previous sentence plus buildings, dams, water, waste water, bridges, major culverts, and archaeological sites.

Appendix 1 provides a current list of GIS layers.

| |
|---|
| TABLES 1 - FY 2012 MONITORING ACTIVITIES |
|---|

Table 1 one displays the monitoring activities the Santa Fe National Forest performed in FY2012. Monitoring requirements can be found in the Santa Fe National Forest Plan in the Monitoring Plan Section, beginning on Page 176. A copy of the Forest Plan and monitoring reports from previous years are located online at <http://fs.usda.gov/santafe> under "Land & Resources Management" and then under "Planning".

The following list of resource-specific questions was used in identifying items in Tables 1. Not all resource areas had monitoring activities responsive to the questions.

1. Air Quality

- Was air quality of the Class I air sheds being maintained in FY 2012?

2. Fire-Fuels

- Are fuel treatments (mechanical and burning) effective?
- How many acres of hazardous fuels reduction activities within the Wildland-Urban Interface and other high risk areas were accomplished in FY 2012?
- How many acres of wildland fire use were used to mimic natural processes, maintain/improve vegetative conditions, and/or restore natural processes and functions to ecosystems in FY 2012?

3. Heritage

- How many acres of surveys and clearances were accomplished in FY 2012?
- Are project avoidance or mitigation measures being followed and effective at protecting heritage resources?
- Are heritage resources being affected in non-project areas and if so, for what reasons?

4. Insect & Disease

- How many acres of survey for insect and disease infestations were accomplished in FY 2012?
- Are insect and disease populations compatible with objectives for restoring or maintaining healthy forest conditions?

5. Law Enforcement

- How many and what kinds of illegal activities cases were handled in FY 2012?

6. Minerals

- How many and of what kind of mining activities and operations were active on the Forest in FY 2012?
- Were all mining operations in compliance with their plans of operation?
- Are minerals and energy (oil and gas) exploration and development project mitigation measures and lease stipulations effective and being followed?
- Where applicable, are reclamation plans for staged reclamation and completed mining operations being met?

7. Facilities

- Were Forest administrative facilities maintained to appropriate health and safety standards in FY 2012?
- How many miles of road have been closed or decommissioned? Is decommissioning effective?
- Are closures and decommissioning effective in preventing motorized access?

8. Range

- How many acres of noxious or non-native invasive species were inventoried and how many acres were treated in FY 2012?
- How many allotments / acres were administered in compliance with AMPs in FY 2012?
- How many allotments / acres were put under new AMPs in FY 2012?

9. Recreation

- Did potable drinking water sources provided by the Forest meet water quality standards in FY 2012?
- Are Forest recreation sites and facilities, inc. trails, meeting health, safety, accessibility, and maintenance requirements and achieving resource / social objectives?
- How many illegal motorized entries into wilderness areas occurred in FY 2012?
- How many miles of trails were maintained to standard in FY 2012?

10. Soil & Water

- To what extent did Forest management activities affect water quality / quantity, and aquatic, riparian, and wetland ecosystems in FY 2012?
- How many miles of stream aquatic / riparian treatments, including the addition woody debris, were accomplished in FY 2012?
- Are project mitigation measures, inc. BMPs being followed and effective at protecting soil / water resources?
- Are the effects of Forest management, including prescriptions, resulting in significant changes in land productivity?

11. Forestry

- How many acres of timber management (thinning, harvest, etc.) were accomplished in FY 2012?
- How many acres of reforestation occurred in FY 2012 and are harvested lands being adequately restocked within five years?
- Are forestry practices maintaining or restoring natural forest types, and encouraging healthier, more resilient and sustainable forest types?
- How many acres of vegetative communities were treated to move them towards their desired condition in FY 2012?

12. Volunteer Programs

- How many and what kinds of volunteer programs took place on the Forest in FY 2012?

13. Wildlife

How many acres are providing for the conservation of and moving toward desired habitat conditions for:

- FS sensitive species?
- T&E species?
- MIS?
- Neo-tropical migratory birds?

TABLE 1. FY 2012 MONITORING ACTIVITIES REQUIRED BY THE FOREST PLAN

| Monitoring Item | Monitoring Description | Area | Data/report Location | Monitoring Frequency |
|----------------------------|---|-------------|----------------------|-------------------------|
| Access Management | | | | |
| Closures | Monitoring compliance of recreationa based closures | Jemez | RD Files | Annually (list changes) |
| Road Condition | Assessment of conditions on 33.5 miles of Level 2 and 3 roads. | Forest-wide | RD and SO Files | Annually (list changes) |
| Road Condition | FR 96, FR 95 conditions monitoring | Cuba | RD | Project-based |
| Road Condition | La Jara roads conditions and fuel wood area conditions | Cuba | Informal Monitoring | Project-based |
| Site Closure | Assess negative impact from forest users to Nogales cliff dwelling site | Cuba | SO | Project-based |
| Special Administrative Use | FR 267 and FR 7D evaluation for access | Cuba | RD | Project-based |

| Monitoring Item | Monitoring Description | Area | Data/report Location | Monitoring Frequency |
|----------------------------------|---|---------------------------|---|-----------------------------------|
| Air Quality & Climate | | | | |
| Precipitation | SNOTEL snow pack measurement | Cuba, Pecos/Las Vegas | http://www.wcc.nrcs.usda.gov/snotel/snotel.pl?sitenum=922&state=nm | Daily 24/7 |
| Precipitation | Measurement of water content in snow pack | Española, Pecos/Las Vegas | NRCS: Lakewood, CO and Albuquerque offices | Winter months per USGS guidelines |
| Prescribed Burn Air Quality | Smoke monitoring (primarily through visual assessments) for all prescribed, broadcast, and pile burning | Forest-wide | RD Fire project Files | Project-based |

| Monitoring Item | Monitoring Description | Area | Data/report Location | Monitoring Frequency |
|--------------------------------------|---|--------------------|--------------------------|--------------------------------|
| Fire & Fuels | | | | |
| Annual Equipment and Gear Inspection | Monthly and annual inspection of fire apparatus | Pecos/Las Vegas RD | Informal Monitoring | Monthly /Annually |
| District Fire Personnel | Yearly monitoring of work/rest ratios of fire personnel | Pecos/Las Vegas RD | Informal Monitoring | Seasonally |
| District Fire Personnel | Yearly monitoring of reportable accidents of district fire personnel | Pecos/Las Vegas RD | Informal Monitoring | Annually |
| Fire Prevention | Powerline inspections along the Mora/San Miguel Electric COOP lines | Pecos/Las Vegas RD | RD fire prevention Files | Annually |
| Fuel Condition Assessments | Fuel moistures (dead and live) | Forest-wide | SO and RO, Fire Files | Seasonally, selected locations |
| Fuel Condition Assessments | Fuels moisture sampling (part of RAWs station) | Forest-wide | SO, Dispatch | Daily during fire season |
| Fuel Condition Assessments | Energy Release Components (WIMS data) | Jemez | RAWs Station | Annually |
| Fuels Treatment | La Sotella (5,500 acres) broadcast burn | Española | Informal Monitoring | Project-based |
| Fuels Treatment | Broadcast Burn Santa Fe Watershed Southeast Block (491 acres) Fall | Española | Informal Monitoring | Project-based |
| Fuels Treatment | Broadcast Burn Santa Fe Watershed (37 acres) pile burning Southwest Block | Española | Informal Monitoring | Project-based |
| Fuels Treatment | Borrogo Mesa (90 acres) Prescribed Burn Crutch | Española | Informal Monitoring | Project-based |
| Fuels Treatment | Santa Fe Watershed (193 acres) Prescribed Burn Southwest Block | Española | Informal Monitoring | Project-based |
| Fuels Treatment | Los Posos (110 acres) Prescribed Burn ¹ | Española | RD Files | Project-based |

¹ See Appendix 2 for the Los Posos Monitoring Report

| Monitoring Item | Monitoring Description | Area | Data/report Location | Monitoring Frequency |
|-------------------------------|--|--------------------|--|----------------------|
| Fire & Fuels | | | | |
| Fuels Treatment | Thinning Santa Fe Watershed (79 acres) Northwest | Española | RD Files | Project-based |
| Fuels Treatment | Santa Fe Watershed Thinning (36 acres) - Nichols | Española | RD Files | Project-based |
| Fuels Treatment | Santa Fe Watershed Thinning (19.2 acres) - Upper Watershed | Española | RD Files | Project-based |
| Fuels Treatment | Implementation monitoring for Begoso prescribed burn (500 acres) | Pecos/Las Vegas | FACTS, Burn Files | Project-based |
| Fuels Treatment | Implementation monitoring of La Cueva fuel break thinning and monitoring of past prescribed burn. | Pecos/Las Vegas | FACTS, RO Forest Management Files | Project-based |
| Fuels Treatment | Monitoring of Laguna Ortiz prescribed burn for resource benefit (760 Acres) | Pecos/Las Vegas | RD, Burn Files | Project-based |
| Fuels Treatment | Implementation monitoring for Southwest Barbero Prescribed (600 acres) | Pecos/Las Vegas | RD, Burn Files | Project-based |
| Fuels Treatment | Sebadilla Prescribed burn monitoring for re-entry | Pecos/Las Vegas RD | Informal Monitoring | Project-based |
| Fuels Treatment | Implementation monitoring conducted by New Mexico State University for FY2008 Walker Flats prescribed burn | Pecos/Las Vegas RD | New Mexico State University, Watershed Program | Project-based |
| Fuels Treatment | Implementation monitoring of Barillas thinning (fuels reduction) | Pecos/Las Vegas RD | Informal Monitoring | Project-based |
| Fuels Treatment | Implementation monitoring of Southeast Barbero for resource benefit (500 acres of 3,200 acre project) | Pecos/Las Vegas RD | Informal Monitoring | Project-based |
| Fuels Treatment Effectiveness | South Fork Fire | Española | Informal Monitoring | Project-based |
| Managed Wildfire | Guacamalla monitoring of post-fire effects (1,550 acres) | Jemez | RD Fire project Files, FACTS | Project-based |
| Prescribed Treatments | Stand exam data collected within San Juan prescribed burn | Jemez | NPS Bandalier | Project-based |

| Monitoring Item | Monitoring Description | Area | Data/report Location | Monitoring Frequency |
|-------------------------|--|--------------------|------------------------------|------------------------------|
| Fire & Fuels | | | | |
| Prevention | Rancho de Chaparral Girl Scout Camp and Deer Lake Estates WUI defensible space monitoring | Cuba | Informal | Twice a year, Annual Meeting |
| Prevention | Measured the number of contacts, miles of road systems, and number of abandoned campfires | Jemez | RD Fire project Files, FACTS | Annually |
| Prevention | Monitor the number of fires, cost of fires, and cause of fires (human or lightning) using Firestat | Jemez | RD Fire project Files, FACTS | Annually |
| Prevention | Monitoring of human caused fires over 10 years to determine the effectiveness of fire prevention program | Pecos/Las Vegas | RD, Prevention Files | Project-based |
| Prevention | WUI defensible space fire hazard monitoring - summer home inspections | Pecos/Las Vegas RD | RD fire prevention Files | Annually |
| Wildfire BAER Rehab | Effectiveness monitoring of rehab in the Tecolote Wildland Fire | Pecos/Las Vegas RD | Informal Monitoring | Project-based |

| Monitoring Item | Monitoring Description | Area | Data/report Location | Monitoring Frequency |
|---------------------------|--|--------------|-----------------------|----------------------|
| Heritage Resources | | | | |
| Effects Monitoring | Brush and obliterate vehicle tracks to site 06-1370, LA 12700 Guaje Ridge Ruin | Española | RD/SO Heritage Files | Project-based |
| Effects Monitoring | Heritage priority assets review of sites 06-0163 Las Conchas Fire treatment | Española | RD Heritage file | Annually |
| Effects Monitoring | Heritage priority assets review of sites 06-0163 Las Conchas Fire treatment | Española | RD Heritage file | Annually |
| Effects Monitoring | Evaluation of conditions at Jemez Cave | Jemez and SO | District and SO Files | Project-based |

| Monitoring Item | Monitoring Description | Area | Data/report Location | Monitoring Frequency |
|---------------------------|---|-------------------------|-------------------------|----------------------------|
| Heritage Resources | | | | |
| Interpretation | Assessed Poshouinge for sign placement | Española | To be installed at site | Installation for fall 2012 |
| Monitoring | Leandro Springs site | Coyote | RD Heritage Files | Project-based |
| Monitoring | FR 151 tree removal; site inspection | Coyote | RD Heritage Files | Project-based |
| Monitoring | Wolf Draw Burial Inspection | Cuba | District and SO Files | Project-based |
| Partnership | Site tours and assessments with School for Advanced Research, Office of Archaeological Studies, Museum of New Mexico, Taos Archaeological Society, Verde Valley Archaeological Society, Site Steward Foundation | Forest-wide | SO, Heritage Files | Ongoing |
| Partnership | Sacred Sites Meetings Sponsorship-Santa Fe National Forest, Carson National Forest, Cibola National Forest. | Forest-wide | SO Files | Ongoing |
| Partnership | School of Advanced Research (SAR) field trip to Tsi-Pin | Coyote | RD Heritage Files | Annually |
| Partnership | Fire Effects and Heritage | Coyote, Española, Jemez | RD Heritage Files | Project-based |
| Partnership | Ancestral Trails documentation Caja del Rio with Bill Davis and Jerry Cooke | Española | SO, Heritage Files | Ongoing |
| Partnership | East Jemez Resource Council-Cultural Resources Subcommittee | Española | SO, Heritage Files | Ongoing |
| Partnership | Interpretation for the Camino Real del Tierra Adentro with Bureau of Land Management and National Park Service | Española | SO, Heritage Files | Ongoing |
| Partnership | San Ildefonso request for site records | Española | RD Files | Annually |
| Partnership | Ohkay Owingeh tree planting | Española | District and SO Files | Project-based |
| Partnership | Ohkay Owingeh MOU development | Española | District and SO Files | Annually |
| Partnership | School of Advanced Research (SAR) trip to POSHUOINGE | Española | District and SO Files | Project-based |

| Monitoring Item | Monitoring Description | Area | Data/report Location | Monitoring Frequency |
|---------------------------|---|--------------|-----------------------|----------------------|
| Heritage Resources | | | | |
| Partnership | Ancestral Trails documentation Caja del Rio with Bill Davis and Jerry Cooke | Española | SO, Heritage Files | Ongoing |
| Partnership | East Jemez Resource Council-Cultural Resources Subcommittee | Española | SO, Heritage Files | Ongoing |
| Partnership | Interpretation for the Camino Real del Tierra Adentro with Bureau of Land Management and National Park Service | Española | SO, Heritage Files | Ongoing |
| Partnership | San Ildefonso request for site records | Española | RD Files | Annually |
| Partnership | Ohkay Owingeh tree planting | Española | District and SO Files | Project-based |
| Partnership | Ohkay Owingeh MOU development | Española | District and SO Files | Annually |
| Partnership | Tesuque Pueblo request for Pacheco Fire and heritage info | Española | RD Files | Project-based |
| Partnership | School of Advanced Research (SAR) trip to POSHUQUINGE | Española | District and SO Files | Project-based |
| Partnership | Fire NSF Grant with University of Arizona, Southern Methodist University and Harvard University | Jemez | District and SO Files | Ongoing |
| Partnership | Guaje Ridge Site Inspection with SAR | Jemez | So Files | Project-based |
| Partnership | ArcBurn Joint Fire Sciences Project partnership to evaluate effects to cultural resources from fire and provide tools | Jemez | District and SO Files | Ongoing |
| Partnership | Hanat Kotyiti Post-fire site Inspection with Pueblo of Cochiti | Jemez and SO | District and SO Files | Project-based |
| Partnership | School for Advanced Research field trip to Gallina | Pecos | SO Files | Project-based |
| Partnership | Kuapa Site Inspection Tour with Pecos Conference Attendees | Pecos | SO Files | Project-based |
| Project Clearances | Project clearance and site marking (21,863 acres) | Forest-wide | SO, Heritage Files | Annually |

| Monitoring Item | Monitoring Description | Area | Data/report Location | Monitoring Frequency |
|---------------------------|---|--------------------|----------------------|----------------------|
| Heritage Resources | | | | |
| Research | Village Ecodynamics Project with WSU, Crow Canyon and NPS | Española and Jemez | SO Heritage Files | Ongoing |
| Site Condition Assessment | Total number of sites documented during cultural resources survey (357 sites) | Forest-wide | SO, Heritage Files | Project-based |
| Site Condition Assessment | Total number of sites monitored and inspected for project work (6 sites) | Forest-wide | SO, Heritage Files | Project-based |
| Site Monitoring | Colorado Peak Fire (2 sites) | Española | District Records | Project-based |
| Site Stewards | Caja del Rio site training | Española | SO Files | Project-based |
| Site Stewards | Bean Field Tank site monitoring | Española | RD Files | Project-based |

| Monitoring Item | Monitoring Description | Area | Data/report Location | Monitoring Frequency |
|--|--|-----------------|------------------------------------|----------------------|
| Insect & Disease Management | | | | |
| Evaluation | Tusas Chaparral assessment for aspen die-off | Cuba | RO, Forest Management Files, RD | Project-based |
| Evaluation | Installation of traps for nuisance species of insects at Field Tract, Windy Bridge, Holy Ghost, Cowles Campground, Windsor, Panchuela, Jacks Creek, Iron Gate, and Admin Site in Las Vegas | Pecos/Las Vegas | Forest Health | Annually |
| Implementation | South Fork Ojitos, 285 acres thinned and slash treated | Cuba | FACTS, RO, Forest Management Files | Project-based |
| Implementation | La Cueva Block B FHP (50 acres) thinned and slash lopped/scattered fuel wood removed | Pecos/Las Vegas | FACTS, RO, Forest Management Files | Project-based |
| Inventory | Campgrounds surveyed for gypsy moth infestation | Forest-wide | RO and SO GIS Files | Annually |
| Inventory | Insect/disease activity monitoring and inventory – aerial detection survey for insect damage, with aerial survey map and report | Forest-wide | RO and SO GIS Files | Annually |

| Monitoring Item | Monitoring Description | Area | Data/report Location | Monitoring Frequency |
|------------------------|--|-----------------|---------------------------|----------------------|
| Law Enforcement | | | | |
| Closure Order | Monitoring effectiveness of closure order for gun control on Glorieta Mesa | Pecos/Las Vegas | SO, Law Enforcement Files | Ongoing |

| Monitoring Item | Monitoring Description | Area | Data/report Location | Monitoring Frequency |
|-------------------|--|-------------|---------------------------------------|------------------------|
| Minerals | | | | |
| Mine Reclamation | Surface inspection of 4 closed mines Utility Block, Cerro del Pino, South Pit, and El Cajete reclaimed mine site | Forest-wide | Cuba RD, Mineral Files | Annually |
| Mine Reclamation | Mine reclamation effectiveness and water quality monitoring: Nacimiento | Cuba | Cuba RD, Mineral Files | Annually |
| Permit Compliance | Monitoring and inspections of 64 O&G wells | Forest-wide | Cuba RD, Mineral Files | Annually and Quarterly |
| Saleable Minerals | Rock collection site permit sales monitoring | Forest-wide | RD, Minerals Files and INFRA database | Annually |

| Monitoring Item | Monitoring Description | Area | Data/report Location | Monitoring Frequency |
|----------------------------------|--|--------------------------------------|---------------------------|----------------------|
| Non-Recreation Facilities | | | | |
| Infrastructure | Inspections & facility condition/maintenance surveys of 63 facilities inc. recreation and administrative sites, and water systems (Forest total 274 agency, 5 lease) | Forest-wide | INFRA database | Annually |
| Infrastructure | Real property inspections; (includes wastewater); condition surveys for maintenance needs; Safety inspection (selected high-risk work areas) | Forest-wide | INFRA database | Annually |
| Infrastructure | Deadman, Redtop, Cerro Pelado, Barillas, & Encino Fire Lookout Tower inspections | Coyote, Cuba, Jemez, Pecos/Las Vegas | RD- Fire, SO-Safety Files | Annually |
| Infrastructure | Facilities inspections for safety and conditions | Cuba | RD, SO | Annually |

| Monitoring Item | Monitoring Description | Area | Data/report Location | Monitoring Frequency |
|----------------------------------|---|-----------------------|----------------------|----------------------|
| Non-Recreation Facilities | | | | |
| Infrastructure | Quarters inspections | Cuba, Pecos/Las Vegas | RD | Annually |
| Infrastructure | Safety modifications to administrative/Quarters propane tanks and water heaters | Jemez | INFRA | Annually |
| Utilities | Permit compliance, site inspection Tesuque radio communication site | Española | SO Files | Annually |
| Utilities | Condition inspections of the bunkhouse, barns, district outbuildings, Panchuela cabin, and Beatty's cabin | Pecos/Las Vegas | RD - safety file | Annually |
| Utilities | Facilities inspections for safety conditions | Pecos/Las Vegas | RD- Safety Files | Annually |
| Utilities | Acequia ditch management and maintenance | Pecos/Las Vegas | RD- Safety Files | Annually |
| Utilities | Manzanares monitoring of cabin | Pecos/Las Vegas | RD- Safety Files | Annually |

| Monitoring Item | Monitoring Description | Area | Data/report Location | Monitoring Frequency |
|---------------------------|--|-------------------------------|---------------------------|----------------------|
| Range | | | | |
| Grazing Permit Compliance | Unauthorized livestock monitoring | Cuba, Coyote, Española, Jemez | INFRA and RD, Range Files | Annually |
| Grazing Permit Compliance | Watering systems conditions after drought: Barbero, Springs, Valle Grande, and El Pueblo | Pecos/Las Vegas | INFRA and RD, | Annually |
| Range Facilities | Riparian enclosure fence monitoring: 4 enclosures on Cuba, 1 enclosure on Española (Polvadera) and 5 enclosures on Coyote, 3 enclosures on Jemez (Rio Cebolla and San Antonio) | Coyote, Cuba, Española, Jemez | INFRA and RD, Range Files | Annually |

| Monitoring Item | Monitoring Description | Area | Data/report Location | Monitoring Frequency |
|------------------|--|-------------------------------|--------------------------------------|---|
| Range | | | | |
| Range Facilities | Condition inspections on fencing, stock tanks, and riparian enclosure fences | Cuba, Coyote, Jemez | INFRA and RD, Range Files | 100% monitored in 2004, 20% on annual basis |
| Range Facilities | Deferred maintenance inventory on Jemez, Coyote, and Cuba, Española – 20% of range improvements (fences, stock tanks, corrals, and spring developments). | Cuba, Coyote, Española, Jemez | INFRA, Range Files | Periodic |
| Range Facilities | Cerro Pelon Trick Tank Construction | Española | INFRA and RD, Range Files | Project-based |
| Range Facilities | Condition inspections on well, pipeline and 16 trough replacements | Pecos/Las Vegas | INFRA and RD, Range Files, NRCS EQIP | Selected sites monitored Annually |
| Range Facilities | Condition inspections: 35 miles of fencing and 35 stock tanks | Pecos/Las Vegas | INFRA and RD, Range Files | 100% monitored in 2010 |
| Range Facilities | Water facilities: monitoring of 6 livestock wells and 30+ troughs | Pecos/Las Vegas | INFRA and RD, Range Files | Annually |

| Monitoring Item | Monitoring Description | | Area | Data/report Location | Monitoring Frequency |
|---------------------------|---|--------------------------|-------------|---------------------------|---------------------------------|
| Range | | | | | |
| Grazing Permit Compliance | Ranger District | <u>2012 allots</u> | Forest-wide | INFRA and RD, Range Files | Annually |
| | Coyote | 11 (101 current permits) | | | |
| | Cuba | 11 (39 current permits) | | | |
| | Española | 5 (10 current permits) | | | |
| | Jemez | 9 (14 current permits) | | | |
| | Pecos/Las Vegas | 20 (29 current permits) | | | |
| | Monitoring includes: pasture rotation, authorized dates, class of animal, confirmation / livestock numbers, updated brand cards and ear tags, and brand checks on livestock | | | | |
| Key Use Area Condition | Ranger District | <u>2012 allots</u> | Forest-wide | INFRA and RD, Range Files | Annually on selected allotments |
| | Coyote | 11 (Key Areas) | | | |
| | Cuba | 8 | | | |
| | Española | 4 | | | |
| | Jemez | 19 | | | |
| | Pecos/Las Vegas | 20 | | | |
| | Monitoring of pre- and post-grazing utilization stubble height of forage species | | | | |
| Grazing Permit Compliance | Ranger District | <u>2012 allots</u> | Forest-wide | INFRA and RD, Range Files | Annually on selected allotments |
| | Coyote | 26 Renewals | | | |
| | Cuba | 2 Renewals | | | |
| | Española | 10 Renewals | | | |
| | Jemez | 0 Renewal | | | |
| | Pecos/Las Vegas | 0 Renewals | | | |
| | Renewal of expired term grazing permits | | | | |

| Monitoring Item | Monitoring Description | | Area | Data/report Location | Monitoring Frequency |
|-----------------|-------------------------------------|--------------------|-------------|-----------------------------------|---------------------------------|
| Range | | | | | |
| Range Condition | Ranger District | <u>2012 allots</u> | Forest-wide | INFRA database and RD Range Files | Annually |
| | Coyote | 2 | | | |
| | Cuba | 2 | | | |
| | Española | 4 | | | |
| | Jemez | 2 | | | |
| | Pecos/Las Vegas | 0 | | | |
| Range Readiness | Ranger District | <u>2012 allots</u> | Forest-wide | INFRA, RD Range Files | Annually on selected allotments |
| | Coyote | 11 | | | |
| | Cuba | 15 | | | |
| | Española | 5 | | | |
| | Jemez | 3 | | | |
| | Pecos/Las Vegas | 10 | | | |
| | Range soil and vegetative readiness | | | | |

| Monitoring Item | Monitoring Description | Area | Data/report Location | Monitoring Frequency |
|----------------------|---|-------------|---|------------------------|
| Recreation | | | | |
| Developed Recreation | Campsite enclosure fencing for Clear Creek Picnic Area and campground and Rio de Las Vacas Campground | Cuba | SO | Project-based |
| Facilities/sites | Compliance with NMED water systems for developed campgrounds | Forest-wide | Contracted, Files in engineering and at districts | Ongoing, summer season |
| Facilities/sites | Condition inspection of recreation sites before opening | Forest-wide | RD Recreation Files | Annually |
| Facilities/sites | Dispersed campsite condition maintenance and monitoring (i.e., litter removal) (non-motorized) | Forest-wide | RD Recreation Files | Summer season |
| Facilities/sites | Hazard tree monitoring at developed sites and facilities | Forest-wide | O: Drive SO Files | Ongoing, summer season |

| Monitoring Item | Monitoring Description | Area | Data/report Location | Monitoring Frequency |
|---------------------------------|---|-----------------|----------------------------|-------------------------|
| Recreation | | | | |
| Facilities/sites | Real property inventories | Forest-wide | RD Recreation Files | Project-based |
| Facilities/sites | Recreation facilities condition inventory and inspection monitoring of Rio Chama, Jemez and Pecos Wild & Scenic Rivers | Forest-wide | INFRA | Annually 10%/year |
| Facilities/sites | Recreation site rule compliance monitoring | Forest-wide | Informal Monitoring | Ongoing, June - October |
| Facilities/sites | Site monitoring for Forest-wide Recreation Facility Improvements | Forest-wide | Informal Monitoring | Project-based |
| Facilities/sites | Water systems monitoring for total coliform – Clear Creek and Rio las Vacas campgrounds | Cuba | RD, Recreation Files | Monthly |
| Motorized Roads & Trails (TMR) | Monitor and evaluate trails as part of the proposed action for TMR | Pecos/Las Vegas | RD | Ongoing |
| Recreation Demo | Fee collection receipts documenting number of campers, dates of visit, and vehicle. | Forest-wide | RD Recreation Files | Ongoing |
| Riparian or Dispersed Campsites | Respect the Rio public education for improvements of riparian and dispersed camping areas | Pecos/Las Vegas | RD | Ongoing |
| Trails | Condition inventory and assessment: trailheads, trail tread, drainage (culverts, water bars), and other infrastructure (10% of RD Annually) | Forest-wide | INFRA, RD Recreation Files | Annually |
| Trails | Route identification, GPS location planning and monitoring of trails proposed as part of Travel Management | Forest-wide | SO Files | Project-based |
| Trails | Trail assessment and trail infrastructure condition monitoring | Forest-wide | INFRA | 20% Annually |
| Trails | Pacheco Fire trail monitoring and reconstruction of rehabbed trails (20 miles) | Española | RD Recreation Files | Project-based |
| Trails | Volunteer work clearing trails (150 miles) | Española | RD Recreation Files | Project-based |

| Monitoring Item | Monitoring Description | Area | Data/report Location | Monitoring Frequency |
|-------------------|--|-----------------|-------------------------------|-------------------------------|
| Recreation | | | | |
| Trails | Trail and trailhead monitoring for safety, clearing, and meeting standards | Española | RD Recreation Files | Annually |
| Trails | Dome Wilderness Service Projects and Public Education (Wilderness Ethics, LNT) | Jemez | Volunteer Database | Project-based |
| Trails | Jemez National Recreation Area trail condition monitoring | Jemez | Jemez | Annually |
| Trails | Monitored trail through ARRA contractors, FS representatives and volunteers | Pecos/Las Vegas | RD, Recreation | per season/seasonal basis |
| Trails | TRAC survey on the Bordo del Medio Trail | Pecos/Las Vegas | RD, Recreation | Project-based |
| Visitor Education | Implement Wilderness Education Plan for Pecos, San Pedro Parks, Chama River Canyon, and Dome Wilderness Areas | Forest-wide | Informal Monitoring, SO Files | Project-based |
| Visitor Education | Uniformed Forest Service Wilderness Ranger patrolling Wilderness for interpretation and compliance | Forest-wide | RD Recreation Files | Summer season (June – August) |
| Visitor Education | Forest Service sponsored Fire prevention education booth at public events (i.e., clean-up days, Earth Day) and schools | Pecos/Las Vegas | RD, Wildlife Files | Annually |
| Visitor Use | Wild and Scenic River condition and compliance monitoring | Forest-wide | INFRA | Annually |
| Visitor Use | Wild and Scenic River campsite monitoring | Forest-wide | INFRA | Annually |

| Monitoring Item | Monitoring Description | Area | Data/report Location | Monitoring Frequency |
|-----------------------|--|---|---|----------------------|
| Recreation | | | | |
| Visitor Use | Visitor use monitoring in San Pedro Parks and Pecos Wildemess | Cuba | RD, Recreation Files | Annually |
| Visitor Use | Respect the Rio program dispersed campsite use and visitor satisfaction including vehicles, number of people, distance from stream | Jemez | Respect the Rio annual report | Annually |
| Visitor Use | Annual volunteer clean-up days in high recreation use areas | Pecos/Las Vegas | RD, Recreation Files | Annually |
| Visitor Use | Respect the Rio baseline data and visitor encounters in dispersed campsites and rec fee collections | Pecos/Las Vegas | RD | seasonal basis |
| Visitor Use | Visitor use monitoring in Pecos Wildemess | Pecos/Las Vegas | RD, Recreation Files | Annually |
| Volunteers | Volunteer activities forest-wide | Forest-wide | Database located at: http://apps.fs.fed.us/syvp/welcome.dol | Annually |
| Wild and Scenic River | Monitored for dispersed campsites | Pecos/Las Vegas | RD Recreation Files | Ongoing |
| Wilderness | Wilderness boundary monitoring and evaluation for San Pedro Parks | Cuba | SO | Project-based |
| Wilderness Use | Track motorized and mechanized approvals in Wilderness | Forest-wide | Wild INFRA | Annually |
| Wilderness Use | Inventory and monitoring of invasive weed species, locations, and acreage in the Wilderness | Coyote, Cuba, Española, Pecos/Las Vegas | INFRA Range | Ongoing |

| Monitoring Item | Monitoring Description | Area | Data/report Location | Monitoring Frequency |
|-------------------|--|------------------------------|-----------------------------|------------------------|
| Recreation | | | | |
| Wilderness Use | Illegal OHV use in wilderness and non-wilderness areas, and impacts from use in designated areas | Española and Pecos/Las Vegas | RD Recreation Files & INFRA | Approx. twice a month |
| Wilderness Use | Wilderness campsite monitoring: fire rings, vegetation impacts, trash, compliance with leave no trace principles | Española and Pecos/Las Vegas | RD Recreation Files | Ongoing, summer season |

| Monitoring Item | Monitoring Description | Area | Data/report Location | Monitoring Frequency |
|-------------------------|--|----------|---|-------------------------------|
| Soil & Water | | | | |
| Riparian Condition | Stream impairment and vehicle exclusion monitoring along Polvadera creek as part of the riparian improvement project | Española | RD, 2009 WFRP Report | Project-based |
| Riparian Condition | Riparian condition assessments for waterways: Cuba: Clear Creek, Rito de las Perchas, Jemez Rio Cebolla, San Antonio | Jemez | RD | Annually for select waterways |
| Soil Condition | Soil condition assessments on Laguna Simon, Sagebrush, and Pinon-Juniper Projects | Cuba | RD Range Files and specific project records | Project-driven |
| Soil Condition | Soil condition assessments on San Pedro, allotments | Cuba | RD Range Files | Project-driven |
| Soil Condition | Radio nuclide sampling along the Buckman Diversion Project (Rio Grande) | Española | RD, Project Files | Project-based |
| Soil Condition | Santa Fe watershed soil erosion monitoring (part of paired watershed study) | Española | RD Watershed Files | Project driven, SFWS TAG |

| Monitoring Item | Monitoring Description | Area | Data/report Location | Monitoring Frequency |
|-------------------------|---|--|---|-----------------------------------|
| Soil & Water | | | | |
| Water Quality | E. coli, total coliform and nitrate/nitrite sampling of 21 recreation sites; year-long sampling of Coyote RD administrative and Vista Linda site. | Forest-wide | SO Engineering, NM Environment Department | Prior to opening & monthly |
| Water Quality | Fenton Hill administrative site | Jemez | Los Alamos National Laboratory | Monthly |
| Water Quality | Water quality measurements taken throughout the Southwest Jemez Mountains CFLRP project area | Jemez | SO, Watershed Files | Monthly May-October, SWJM Project |
| Water Quality | Las Vegas Municipal Watershed water intake | Pecos/Las Vegas | City of Las Vegas Water Treatment Plant | Monthly |
| Water Quantity | Stream flow and water quality data: Rio Grande, Chama and Jemez Rivers, Mora, Galinas and Pecos | Coyote, Española, Jemez, Pecos/Las Vegas | http://waterdata.usgs.gov/nm/nwis/nwis | Continuous |
| Water Quantity | Stream flow data measured above Paliza Campground for the Southwest Jemez Mountains CFLRP project | Jemez | Valles Caldera National Preserve | Project-based, SWJM Project |
| Watershed Condition | BMP effectiveness Gallinas/Tecolote Watersheds | Pecos/Las Vegas | RD Files | Project-driven |

| Monitoring Item | Monitoring Description | Area | Data/report Location | Monitoring Frequency |
|------------------------------|--|-------------|--|----------------------|
| Vegetation Management | | | | |
| Invasive Species | Monitor and treated 60 acres of noxious weeds | Coyote | GIS/Range Files | Annually |
| Invasive Species | Inventoried, monitored, and mapped ~75 acres of new populations of invasive Russian Knapweed, Bull Thistle, Scotch Thistle, Musk Thistle, Red Flax, Cheat Grass, Canadian Thistle, Spotted Knapweed, and Diffuse Knapweed. | Cuba, Jemez | RD project Files, GIS Corporate database | Annually |

| Monitoring Item | Monitoring Description | Area | Data/report Location | Monitoring Frequency |
|------------------------------|--|-----------------|---|----------------------|
| Vegetation Management | | | | |
| Invasive Species | Invasive weed population inventory on allotments | Pecos/Las Vegas | RD Range Files | Annually |
| Invasive Species | Mechanical control and implementation monitoring of scotch thistle | Pecos/Las Vegas | RD Range Files | Annually |
| Special Forest Products | Collection permit compliance- firewood, Christmas trees, boughs, wildings, seed cones, vigas, latillas, and fence posts | Forest-wide | TIM, INFRA | Ongoing |
| Special Forest Products | Collection permits - product price, terms of collection and products to be collected, dates of collection, date of issuance, issuing officer | Forest-wide | INFRA database | Annually, ongoing |
| Special forest products | Removed and sold fuel wood, posts, poles, miscellaneous small round wood, Christmas trees, conifer cones, wildings and other small diameter products | Forest-wide | Timber Sale Accounting database | Annually |
| Special Forest Products | Monitored vegetative treatments in Mesa Poleo WUI Camino Corral | Coyote | RD, Project Files | Project-based |
| Special Forest Products | Christmas trees: 305 trees | Cuba | TIM | Annually |
| Special Forest Products | Personal Use permits: 405 permits | Cuba | TIM, ATSA | Annually |
| Special Forest Products | Free Ceremonial Use permits: 41 permits | Cuba | TIM, ATSA | Annually |
| Special Forest Products | Cuba Mesa pinon/juniper thinning – 25 acres | Cuba | FACTS, GIS | Project-based |
| Special Forest Products | Fuel wood area monitoring Tanques | Cuba | Informal Monitoring | Project-based |
| Special Forest Products | Firewood permits: 4000 cords | Española | PTSAR database, Timber Sale Account database, INFRA | Annually |
| Special Forest Products | Christmas trees: 166 permits | Española | RD project file | Project - based |
| Special Forest Products | Christmas trees: 998 trees permits | Española | TIM | Annually |
| Special Forest Products | Personal Use permits: 1493 permits | Española | TIM, ATSA | Annually |

| Monitoring Item | Monitoring Description | Area | Data/report Location | Monitoring Frequency |
|------------------------------|--|-----------------|---------------------------------|----------------------|
| Vegetation Management | | | | |
| Special Forest Products | Christmas trees: 1714 trees | Jemez | TIM | Annually |
| Special Forest Products | Personal Use permits: 1087 permits | Jemez | TIM, ATSA | Annually |
| Special Forest Products | CFRP project implementation monitoring: Barela/Gallinas, Walker Flats, Barbero/NEC, Griegos Logging | Pecos/Las Vegas | RD Project Files | Project-based |
| Special Forest Products | Personal Use permits: 2234 permits | Pecos/Las Vegas | TIM, ATSA | Annually |
| Special Forest Products | Free-Use Firewood permits: 54 permits | Pecos/Las Vegas | TIM, ATSA | Annually |
| Special Forest Products | Christmas trees: 1108 trees | Pecos/Las Vegas | TIM | Annually |
| Timber | Forest Timber Program Review | Forest-wide | SO | Every other year |
| Timber | Total timber products removed | Forest-wide | Timber Sale Accounting database | Annually |
| Vegetation Treatments | Mesa Poleo WUI, 84 acres thinned by mastication | Coyote | FACTS, Forest Management Files | Project-based |

| Monitoring Item | Monitoring Description | Area | Data/report Location | Monitoring Frequency |
|---|--|-----------------------|----------------------|----------------------|
| Volunteer & Educational Programs | | | | |
| Environmental Education | Classroom fire prevention education visits to elementary, middle schools, and high schools and at events such as Earth Day and Clean-up days | Cuba | RD | Project-based |
| Environmental Education | Respect the Rio Student participants orientation | Pecos/Las Vegas | RD Files | Project-based |
| Environmental Education | Classroom fire prevention education visits to elementary, middle schools, and high schools | Pecos/Las Vegas, Cuba | RD | Project-based |
| Special Events | YCC education sessions | Pecos Las Vegas | RD Files | Annually |

| Monitoring Item | Monitoring Description | Area | Data/report Location | Monitoring Frequency |
|---|---|-----------------------|----------------------|----------------------|
| Volunteer & Educational Programs | | | | |
| Special Events | Upper Pecos Watershed Association Annual Clean-up Event in conjunction with the State Free Fishing Day | Pecos/Las Vegas | Pecos RD Files | Annually |
| Visitor Education | Uniformed Forest Service personnel stationed at the Cuba Visitor's Center for interpretation | Cuba | Informal Monitoring | As needed |
| Visitor Use | Volunteer days on district trails (1,000 hours) | Española | RD, Recreation Files | Project-based |
| Visitor Use | Volunteer tool sharpening (2 days) | Española | RD, Recreation Files | Project-based |
| Visitor Use | Volunteer clean-up days in Caja del Rio, and Rio Chama | Española | RD, Recreation Files | Annually |
| Volunteer Activities | Partnership with the Step into Cuba Alliance to promote physical activity and fitness in the community | Cuba | RD Recreation Files | Ongoing |
| Volunteer Activities | Campground hosts posted at campsites to maintain campgrounds and monitor fee compliance; Cuba - Rio las Vacas and Clear Creek; Pecos/Las Vegas - Jack's Creek, Field Tract, Holy Ghost | Cuba, Pecos/Las Vegas | RD Recreation Files | Summer season |
| Volunteer Activities | Campground hosts posted at campsites to maintain campgrounds and monitor fee compliance; Cuba - Rio las Vacas and Clear Creek; Pecos/Las Vegas - Jack's Creek, Field Tract, Holy Ghost, El Porvenir, E.V. Long | Cuba, Pecos/Las Vegas | RD Recreation Files | Summer season |
| Volunteer Activities | Volunteer activities including trail maintenance activities (clearing and tread repair) and trash collection, Volunteer Wilderness Rangers also making contacts with public on trails and cleaning wilderness campsites, equestrian packing for wilderness projects | Pecos/Las Vegas | RD Files | Project-based |

| Monitoring Item | Monitoring Description | Area | Data/report Location | Monitoring Frequency |
|---|--|---------------|------------------------------|----------------------|
| Wildlife, Fish & Plants | | | | |
| Las Conchas Fire Monitoring | Visited Peralta Canyon to assess Las Conchas fire impacts in canyon and status of riparian enclosure; damaged on north end; needs repair | Jemez | RD Wildlife Files | Project-based |
| Las Conchas Fire Monitoring | Visited Peralta Canyon with Chantel Cook and fish crew; they did shocking to assess any fish occupancy; none found | Jemez | SO Fisheries Files | Project-based |
| Las Conchas Fire Monitoring - MSO PACs in fire boundary | Monitoring of eight MSO PACs using taped calls to assess MSO occupancy - 4,800 ac; no responses were heard | Jemez | RD Wildlife Files (pictures) | Project-based |
| Sensitive, MIS, and Non-sensitive Species Populations | Rio Grande cutthroat trout population surveys | Forest - wide | SO Fisheries Files | Project-based |
| Sensitive, MIS, and Non-sensitive Species Populations | Rio Grande cutthroat trout population surveys: Polvadera Creek post-South Fork Fire (June 2010) surveyed Oct 2012 - negative for fish | Española | SO Fisheries Files | Post-fire assessment |
| Sensitive, MIS, and Non-sensitive Species Populations | Peregrine falcon nesting/reproduction survey 1 site - results negative | Española | WFRP-2012 | Once every 3-5 years |
| Sensitive, MIS, and Non-sensitive Species Populations | Peregrine falcon nesting/reproduction survey 1 site - results negative | Española | WFRP-2012 | Activity based |
| Sensitive, MIS, and Non-sensitive Species Populations | Macroinvertebrate population surveys - Vallecitos Creek | Jemez | SO Fisheries Files | Annual |

| Monitoring Item | Monitoring Description | Area | Data/report Location | Monitoring Frequency |
|------------------------------------|--|---------------------------|-------------------------|---|
| Wildlife, Fish & Plants | | | | |
| T&E / FS Sensitive Species | Outside of Las Conchas Fire area - 7 Mexican spotted owl protected activity centers - monitoring: 4,200 ac. | Jemez | RD Wildlife Files | Approximately 3-6 MSO PACs monitored per year |
| T&E / FS Sensitive Species | Monitored vegetative component within MSO PAC areas in upper Rio Cebolla | Jemez | RD Wildlife Files | Project-based |
| T&E / FS Sensitive Species | Monitoring of occupancy of goshawk PFAs - 1,840 ac. | Jemez | RD Wildlife Files | Annual |
| T&E / FS Sensitive Species | Jemez Mountain salamander surveys/suitable habitat monitoring - 74 acres | Jemez | SO Files | Annual |
| T&E / FS Sensitive Species | Peregrine falcon nest monitoring for reproduction - 700 acres | Jemez | RD Wildlife Files | Project-based |
| T&E / FS Sensitive Species | Rio Cebolla brown trout monitoring and removal with NMDG&F | Jemez | SO Fisheries Files | Annual |
| Wildlife | SWJ CFLRP monitoring of avian populations - 120 acres | Jemez | RD Wildlife Files | Annual |
| Wildlife Habitat Improvement | Check 8 trick-tanks in spring to turn on and fall to turn off; assess any maintenance needs, assess wildlife use | Jemez | RD Wildlife Files | Twice a year |
| Wildlife Habitat Improvement | Cleared silt/ash from 20 earthen dams to restore water holding capacity for wildlife - 7141 acres | Jemez | RD, Wildlife Files | Annually |
| Wildlife Habitat/Use | Rocky Mountain bighorn sheep: population monitoring by NMDG&F | Pecos/Las Vegas, Española | NM Dept. of Game & Fish | Annually by NMDG&F |

Appendices

Santa Fe National Forest GIS Layers, April 2012
Los Posos Monitoring Report

Appendix 1 – Forest Plan Monitoring and Evaluation Report, Santa Fe National Forest, FY12

Santa Fe National Forest- Location of GIS Data- Updated 04/20/2013

Layer Files: T:\FS\Reference\GIS\r03_sfe\LayerFile; SDE Connection Files: T:\FS\Reference\GIS\r03_sfe\DatabaseConnection

SDE DATABASE: S_R03_SFE.R03_SFE_LIB (unless otherwise noted) (Server: idb.fs.fed.us User: / Instance: sde:oracle9i::g_r03_sfe Version: S_R03_SFE.R03_SFE_LIB

| Layer File Name | SDE Feature Dataset | SDE Feature Class Name | Description | Other Location |
|---|--------------------------------|----------------------------------|--|--|
| SFE_Activity_AccomplishedThrough2010.lyr | S_R03_SFE.Activities | S_R03_SFE.ActivityJoined160VW | Activity polygons joined (snapshot) to the FACTS database to display activity type, date, NEPA info and more | |
| SFE_Activity_Polygon.lyr | S_R03_SFE.Activities | S_R03_SFE.ActivityPolygon | Ground disturbing activities, planned, NEPA, or accomplished polygons | |
| SFE_CFF_Line.lyr | S_R03_SFE.CFF | S_R03_SFE.CFF_Ln | Cartographic Feature Files (all lines and points that are on 1:24,000 topo maps) | |
| SFE_CFF_Point.lyr | S_R03_SFE.CFF | S_R03_SFE.CFF_Pt | | |
| SFE_ConstructedFeature_AdminSite.lyr | S_R03_SFE.Constructed Features | S_R03_SFE.AdminSite | Administrative sites on the Santa Fe National Forest. Includes features like guard stations and ranger stations. Should cover all sites listed in Infra. | |
| SFE_ConstructedFeature_Bridge.lyr | S_R03_SFE.Constructed Features | S_R03_SFE.Bridge | Bridges- these locations are derived from Infra based on the recorded milepost on a road. | |
| SFE_ConstructedFeature_Dam.lyr | S_R03_SFE.Constructed Features | S_R03_SFE.Dam | Dams on and around the Santa Fe National Forest. Linked to Infra table | |
| SFE_ConstructedFeature_GravelPit.lyr | S_R03_SFE.Constructed Features | S_R03_SFE.GravelPit | Gravel pits in and around the westside of the Santa Fe National Forest. | |
| SFE_ConstructedFeature_Line_akaRangelImprovement.lyr | S_R03_SFE.Constructed Features | S_R03_SFE.Constructed_Feature_In | This dataset includes a variety of constructed features, (e.g, fences, bridges, culverts, buildings, communication systems, gates, helipads, parking lots, shooting range, etc.) and non-constructed features which may include natural barriers and other features that need to be maintained spatially. These features are generally tracked and linked to Infra's constructed features. | |
| SFE_ConstructedFeature_Point_akaRangelImprovement.lyr | S_R03_SFE.Constructed Features | S_R03_SFE.Constructed_Feature_pt | | |
| SFE_ConstructedFeature_Tower.lyr | S_R03_SFE.Constructed Features | S_R03_SFE.Tower | Depicts locations of electronic towers and/or fire lookout towers in and around the Santa Fe National Forest. | |
| SFE_ConstructedFeature_WeatherStation.lyr | S_R03_SFE.Constructed Features | S_R03_SFE.WeatherStation | Weather stations in and around the Santa Fe National Forest including SNOTEL and RAWS | |
| SFE_DEM10m.lyr | (Raster) | S_R03_SFE.DEM_10METER | Digital Elevation Model with 10m resolution, along with derived products | T:\FS\Reference\GIS\r03_sfe\Data\Raster\DEM\ |
| SFE_DEM10m_1000FtElevationBand.lyr | (Raster) | S_R03_SFE.DEM_10METER | | |
| SFE_DEM10m_Aspect.lyr | (Raster) | S_R03_SFE.ASPECT | | |
| SFE_DEM10m_Hillshade.lyr | (Raster) | S_R03_SFE.NW_SHADOW | | |
| SFE_DEM10m_HillshadeTif.lyr | (Raster)- not in SDE | Hillshade10m.tif | | |
| SFE_DEM10m_SlopePercent.lyr | (Raster) | S_R03_SFE.SLOPE_PERCENT | | |
| SFE_Fire_CommunityAtRisk.lyr | S_R03_SFE.Fire_Management | S_R03_SFE.CommunityAtRisk | Point locations of communities at risk | |

Appendix 1 – Forest Plan Monitoring and Evaluation Report, Santa Fe National Forest, FY12

| Layer File Name | SDE Feature Dataset | SDE Feature Class Name | Description | Other Location |
|---|---------------------------|---------------------------------------|--|--|
| SFE_Fire_CommunityAtRiskWUI.lyr | S_R03_SFE.Fire_Management | S_R03_SFE.CommunityAtRiskWUI | Includes both the WUI's that were approved by USFW as well as the communities at risk | |
| SFE_Fire_HelicopterDipSite.lyr | S_R03_SFE.Fire_Management | S_R03_SFE.HelicopterDipSite | Locations of dip sites where water is available for use for wildfire suppression. | |
| SFE_Fire_HistoryPoint.lyr | S_R03_SFE.Fire_Management | S_R03_SFE.Fire_History_pt | Fire history points | |
| SFE_Fire_HistoryPolygon.lyr | S_R03_SFE.Fire_Management | S_R03_SFE.Fire_History_pl | Fire history polygons- Only fires 10 acres or larger in size | |
| SFE_Fire_ManagementUnit.lyr | S_R03_SFE.Fire_Management | S_R03_SFE.FireManagementUnit | Fire Management Units (FMU) are units in which fire suppression efforts and resources are managed according to priority and need. | |
| SFE_Fire_ManagementZone.lyr | S_R03_SFE.Fire_Management | S_R03_SFE.FireManagementZone | The boundaries of the Fire Management Zones and Representative Locations on the Santa Fe National Forest. | |
| SFE_Fire_PlanningUnit.lyr | S_R03_SFE.Fire_Management | S_R03_SFE.FirePlanningUnit | Fire Planning Units(FPU) are units in which fire suppression efforts and resources are managed according to priority and need. | |
| SFE_Fire_RegimeConditionClass_R3.lyr | S_R03_SFE.Fire_Management | S_R03_SFE.Fire_Regime_Condition_Class | Fire Regime Condition Class | idb.fs.fed.us / sde:oracle9i::g_r03 S_R03.R03_LIB |
| SFE_Fire_Restriction.lyr | S_R03_SFE.Fire_Management | S_R03_SFE.FireRestriction | Preplanning attempt to map closure areas when the Forest goes into Stage I, II, or III fire restrictions. | |
| SFE_Fire_Severity.lyr | S_R03_SFE.Fire_Management | S_R03_SFE.FireSeverity | Areas burned severely by fire - only available for larger fires where BAER work was done. | |
| SFE_Fire_WildlandFireUse.lyr | S_R03_SFE.Fire_Management | S_R03_SFE.WildlandFireUse | Areas on the Forest where WFU is allowed or is not allowed. | |
| SFE_Fire_WildlandUrbanInterface.lyr | S_R03_SFE.Fire_Management | S_R03_SFE.Wildland_Urban_Interface | Wildland Urban Interface Areas approved by USFW. Wildland Urban Interface (WUI) refers to the line, area or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels. | |
| SFE_Fish_RGChubOccupiedStream.lyr | S_R03_SFE.Fisheries | S_R03_SFE.RGChub_OccupiedStream | Rio Grande Chub occupied streams. | \\ds.fs.fed.us\EFSD\DataCenter \citrix\AppData\jhutchison\Appl ication |
| SFE_Fish_RGCTBarrier.lyr | S_R03_SFE.Fisheries | S_R03_SFE.RGCT_Barrier | Barriers to Rio Grande Cutthroat Trout Habitat | |
| SFE_Fish_RGCTOccupiedStream.lyr | S_R03_SFE.Fisheries | S_R03_SFE.RGCT_OccupiedStream | Rio Grande Cutthroat Trout occupied streams. The dataset includes location, habitat, and population data for Core Conservation and Conservation Populations of RGCT | |
| SFE_Fish_RGCTRestorationOpportunity.lyr | S_R03_SFE.Fisheries | S_R03_SFE.RGCT_RestorationOpportunity | Rio Grande Cutthroat Trout restoration opportunity streams | |
| SFE_Fish_RGSuckerOccupiedStream.lyr | S_R03_SFE.Fisheries | S_R03_SFE.RGSucker_OccupiedStream | Rio Grande Sucker occupied streams. | |
| SFE_Land_AdminForest.lyr | S_R03_SFE.Land | S_R03_SFE.Admin_Forest | Administrative/ownership boundaries for the Santa Fe National Forest | |
| SFE_Land_JemezNRA.lyr | S_R03_SFE.Land | S_R03_SFE.JemezNRA | Jemez National Recreation Area boundary | |

Appendix 1 – Forest Plan Monitoring and Evaluation Report, Santa Fe National Forest, FY12

| Layer File Name | SDE Feature Dataset | SDE Feature Class Name | Description | Other Location |
|---|----------------------|--|--|---|
| SFE_Land_OtherNationalDesignation.lyr | S_R03_SFE.Land | S_R03_SFE.Other_National_Designation | A region subclass depicting National Forest System land parcels that have management or use limits placed on them by legal authority. Examples are: National Recreation Area, National Monument, and National Game Refuge. | |
| SFE_Land_ProcForest.lyr | S_R03_SFE.Land | S_R03_SFE.Proc_Forest | Original proclaimed forest boundary- may not portray the same extent as the administrative boundary | |
| SFE_Land_RangerDistrict.lyr | S_R03_SFE.Land | S_R03_SFE.Ranger_District | USFS ranger district boundaries | |
| SFE_Land_Sections.lyr | S_R03_SFE.Land | S_R03_SFE.Sections | Boundaries of Land Survey features called sections, defined by the Public Lands Survey System Grid. Normally, 36 sections make up a township. | |
| SFE_Land_SectionsFilledIn.lyr | S_R03_SFE.Land | S_R03_SFE.Sections_FilledIn | Non-surveyed areas without sections and townships were "filled in" at the request for the Fire Dispatch Office to display interpolated TRS for fire fighting purposes. | |
| SFE_Land_SpecialInterestMgt.lyr | S_R03_SFE.Land | S_R03_SFE.Special_Interest_Mgt | Areas under special or unique management prescriptions. Ex: Anadromous Spawning Area, Indian Reserve Classification Area, Archeological Area, Scenic Area, Research Natural Area | |
| SFE_Land_SurfaceOwnership.lyr | S_R03_SFE.Land | S_R03_SFE.Surface_Ownership | Ownership parcels of the surface estate | |
| SFE_Land_SurfaceOwnershipOutsideBox.lyr | S_R03_SFE.Land | S_R03_SFE.Surface_Ownership_OutsideBox | Surface_Ownership_SFNF was UNIONed with a box around the Forest | |
| SFE_Land_Townships.lyr | S_R03_SFE.Land | S_R03_SFE.Townships | Land Survey features called townships, defined by the Public Lands Survey System (PLSS) Grid. Each township is referenced by its tier and range numbers. | |
| SFE_Land_TownshipsFilledIn.lyr | S_R03_SFE.Land | S_R03_SFE.Townships_FilledIn | Non-surveyed areas without sections and townships were "filled in" at the request for the Fire Dispatch Office to display interpolated TRS for fire fighting purposes. | |
| SFE_Land_Wilderness.lyr | S_R03_SFE.Land | S_R03_SFE.Wilderness | Congressionally designated Wilderness areas | |
| SFE_Land_WildScenicRiver.lyr | S_R03_SFE.Land | S_R03_SFE.Wild_and_Scenic_Rivers | Areas designated as Wild and Scenic Rivers. | |
| SFE_NortheastNewMexicoMap.lyr | (Raster)- not in SDE | NortheastNewMexico.sid | Northeast New Mexico scanned map | T:\FS\Reference\GIS\r03_sfe\Data\Raster\VisitorMap\ |
| SFE_OrthoPhoto_1936.lyr | (Raster)- not in SDE | Airphoto_East_1935.sid; etc. | Recent and Historical Orthophotos | T:\FS\Reference\GIS\r03_sfe\Data\Raster\Airphoto1935\ |
| SFE_OrthoPhoto_1996.lyr | (Raster)- not in SDE | DOQ_East_1996.sid; West: Central | | T:\FS\Reference\GIS\r03_sfe\Data\Raster\DOQ1996\ |
| SFE_OrthoPhoto_2009.lyr | (Raster)- not in SDE | NAIP_LosAlamosCounty_2009.sid; etc. | | T:\FS\Reference\GIS\r03_sfe\Data\Raster\DOQ2009\ |
| SFE_Other_AbandonMine.lyr | S_R03_SFE.Other | S_R03_SFE.AbandonMine | Abandon mines within the Santa Fe National Forest. | |
| SFE_Other_City.lyr | S_R03_SFE.Other | S_R03_SFE.City | Cities in northern New Mexico. | |

Appendix 1 – Forest Plan Monitoring and Evaluation Report, Santa Fe National Forest, FY12

| Layer File Name | SDE Feature Dataset | SDE Feature Class Name | Description | Other Location |
|--|----------------------|---|--|---|
| SFE_Other_GeographicNamesInfoSystem.lyr | S_R03_SFE.Other | S_R03_SFE.GNIS | Geographic Names Info System- points and place names for natural terrestrial features in the state of New Mexico. These features include peaks, valleys, mountain ranges, ridges, and forests. | |
| SFE_Other_LawEnforcementViolation.lyr | S_R03_SFE.Other | S_R03_SFE.LawEnforcementViol_20012005; 2003-2005; WoodProd | From LEIMARS database, offenses include illegal campfire, traffic accident, poaching, illegal removal of timber, etc. | |
| SFE_Other_StructureCFF.lyr | S_R03_SFE.Other | S_R03_SFE.Structure | Points from CFFs- structures such as small buildings, large buildings, places of worship, and schools. | |
| SFE_Other_StructureCounty.lyr | (not in SDE) | Sandoval_Structure_2007.shp; SantaFe_Structure_2007; LosAlamos_Structure_2007 | Building foot prints of structures in the surrounding counties | T:\FS\Reference\GIS\r03_sfe\ Data\County\ |
| SFE_Other_Town.lyr | S_R03_SFE.Other | S_R03_SFE.Town | Towns and larger populated places in northern New Mexico | |
| SFE_Other_UtilityLine.lyr | S_R03_SFE.Other | S_R03_SFE.UtilityLine | Depicts locations of Major, Primary and Transmission powerlines on and around the Santa Fe National Forest. | |
| SFE_Planning_InventoriedRoadlessArea.lyr | S_R03_SFE.Planning | S_R03_SFE.IRA | Inventoried Roadless Areas- the 2001 Roadless Rule prohibits road construction in these areas | |
| SFE_Planning_ManagementArea.lyr | S_R03_SFE.Planning | S_R03_SFE.ManagementArea | Management Areas in the forest- areas managed for specific cultural, natural, or recreation resources | |
| SFE_Planning_OilAndGasManagementArea.lyr | S_R03_SFE.Planning | S_R03_SFE.OilGasMgtArea | Oil and Gas management area boundary resulting from the final Oil and Gas EIS. | |
| SFE_Range_Keyarea.lyr | S_R03_SFE.rmu | S_R03_SFE.rmu_keyarea | Monitoring area boundaries within each pasture. | |
| SFE_Range_Subunit_akaPasture.lyr | S_R03_SFE.rmu | S_R03_SFE.rmu_subunit | Range pastures and exclosures. (Each range allotment may be subdivided into pastures necessary for grazing management). | |
| SFE_Range_Unit_akaAllotment.lyr | S_R03_SFE.rmu | S_R03_SFE.rmu_unit | Range allotments, General Resource Areas, and Wild Horse and Burro territories on the Santa Fe National Forest. | |
| SFE_Recreation_DispersedCampsite.lyr | S_R03_SFE.Recreation | S_R03_SFE.DispersedCampsite | Point locations of dispersed campsites. | |
| SFE_Recreation_Niche.lyr | S_R03_SFE.Recreation | S_R03_SFE.RecreationNiche | This layer was developed as part of the Recreational Facility Site Master Plan (RFSMP) to answer question, "What role does the Santa Fe NF serve in recreation opportunities for the public?" | |
| SFE_Recreation_NVUMSurvey2003.lyr | S_R03_SFE.Recreation | S_R03_SFE.NVUMSurvey_2003 | National Visitor Use Monitoring survey points for the Santa Fe NF | |
| SFE_Recreation_OpportSpectrum.lyr | S_R03_SFE.Recreation | S_R03_SFE.RecreationOpportSpectrum | Spatial location of areas showing the type of Recreation Opportunity Settings (ROS) that exist on the Santa Fe NF | |
| SFE_Recreation_ResidenceCabin.lyr | S_R03_SFE.Recreation | S_R03_SFE.ResidenceCabin | General location for Residence Cabins | |
| SFE_Recreation_ResidencePlot.lyr | S_R03_SFE.Recreation | S_R03_SFE.ResidencePlot | General location of Residence Tracts and the plots within them | |

Appendix 1 – Forest Plan Monitoring and Evaluation Report, Santa Fe National Forest, FY12

| Layer File Name | SDE Feature Dataset | SDE Feature Class Name | Description | Other Location |
|--|--------------------------|---|--|---|
| SFE_Recreation_Site.lyr | S_R03_SFE.Recreation | S_R03_SFE.Recreation_Site_pt | Recreation sites within or in close proximity to an administrative unit; sites so small they are represented as points instead of polygons | |
| SFE_Recreation_VQO_West.lyr | S_R03_SFE.Recreation | S_R03_SFE.VQO_West | Visual Quality Objectives- the VQO model was run for the Forest for Forest Plan Revision in the 1980s | |
| SFE_TEU_InterpsSoilLandUse.lyr | S_R03_SFE.TEU | S_R03_SFE.TEU_Interps_SoilLandUse | TEU (terrestrial ecological units) are mapped units of land within which ecological structure, function, capabilities, responses, and management opportunities and limitations can be predicted. This feature class depicts land use interpretations such as erosion hazard. | |
| SFE_TEU_LandType.lyr | S_R03_SFE.TEU | S_R03_SFE.TEU_Land_Type | TEU feature. This feature provides an inventory of the various ecotypes on the Santa Fe NF | |
| SFE_TEU_PotentialNatVeg_AggMapUnitRSW.lyr | S_R03_SFE.TEU | S_R03_SFE.PotentialNatVeg_AggMapUnitRSW | This displays the Potential Natural Vegetation (PNV) classifications attached to the map unit components aggregated to the map unit | |
| SFE_TEU_SFmapLeg.lyr | S_R03_SFE.TEU | S_R03_SFE.TEU_SFmapLeg | The Land Type feature was linked to an Access table for additional information | |
| SFE_TEU_SoilClassAggMapUnit.lyr | S_R03_SFE.TEU | S_R03_SFE.SoilClass_AggMapUnit | This report displays the Soil classifications attached to the map unit components aggregated to the map unit. | |
| SFE_TEU_SoilProperties.lyr | S_R03_SFE.TEU | S_R03_SFE.TEU_SoilProperties | The Land Type feature was linked to an Access table for additional information | |
| SFE_Topo24k.lyr | (Raster)- not in SDE | Topo24k_East.sid; West: Central | 1:24,000 quadrangles for the Santa Fe NF | T:\FS\Reference\GIS\r03_sfe\Data\Raster\Topo24k\Mosaic\ |
| SFE_Transportation_County.lyr | (not in SDE) | LosAlamos_Road_2007.shp; etc. | County roads | T:\FS\Reference\GIS\r03_sfe\Data\County\ |
| SFE_Transportation_RoadLinkedInfraOperMaintenanceLevel.lyr | S_R03_SFE.Transportation | S_R03_SFE.RoadLinkedInfra | The GIS road_route feature class was linked to IWeb II_LINEAR_EVENTS table to depict a spatial snapshot of the Infra database. | |
| SFE_Transportation_RoadLinkedInfraSystemStatus.lyr | S_R03_SFE.Transportation | S_R03_SFE.RoadLinkedInfra | | |
| SFE_Transportation_RoadMain.lyr | S_R03_SFE.Transportation | S_R03_SFE.RoadMain | Main roads in and around the Santa Fe NF, including highways, county roads and main Forest roads | |
| SFE_Transportation_Trail.lyr | S_R03_SFE.Transportation | S_R03_SFE.Trail | Trail routes on the Santa Fe NF. | |
| SFE_Veg_BaseVegLocation_akaCompartment.lyr | S_R03_SFE.Vegetation | S_R03_SFE.Base_Vegetation_Location | Locations or compartments derived from the base vegetation feature class | |
| SFE_Veg_BaseVegSite_akaStand.lyr | S_R03_SFE.Vegetation | S_R03_SFE.Base_Vegetation_Site | This feature class is the plant community, or floristic composition and vegetation structure, occurring at a given location at the current time. | |
| SFE_Veg_FSvegPlot.lyr | S_R03_SFE.Vegetation | S_R03_SFE.FSveg_Plot | Plot locations of stand examinations in the field | |
| SFE_Veg_InvasivePlant.lyr | S_R03_SFE.Vegetation | S_R03_SFE.Invasive_Plant | This feature class depicts the extents of invasive plant infestations | |

Appendix 1 – Forest Plan Monitoring and Evaluation Report, Santa Fe National Forest, FY12

| Layer File Name | SDE Feature Dataset | SDE Feature Class Name | Description | Other Location |
|-------------------------------------|---------------------------------|---|--|--|
| SFE_Veg_InvasivePlantAll.lyr | S_USA.InvasiveSpecies | S_USA.InvasivePlantAll | All the Invasive Plant Infestation polygons collected by the National Invasive Plant Inventory Protocol. | edwdb.fs.fed.us / sde:oracle9i SDE.DEFAULT |
| SFE_Veg_MidScaleCanopyCover.lyr | S_R03_SFE.Midscale_Existing_Veg | S_R03_SFE.canopy_cover_map_units | These feature set depicts the existing vegetation of the forests and grasslands of the Southwestern Region at the mid-scale as four products - life form, dominance type map units, canopy cover map units, and size map units | |
| SFE_Veg_MidScaleDominantType.lyr | S_R03_SFE.Midscale_Existing_Veg | S_R03_SFE.dominance_type_map_units | | |
| SFE_Veg_MidScaleLifeForm.lyr | S_R03_SFE.Midscale_Existing_Veg | S_R03_SFE.life_form | | |
| SFE_Veg_MidScaleSizeClass.lyr | S_R03_SFE.Midscale_Existing_Veg | S_R03_SFE.size_map_units | | |
| SFE_Veg_RiparianAreaTEU.lyr | S_R03_SFE.Vegetation | S_R03_SFE.RiparianAreaTEU | This riparian area layer was developed from the TEU layer by query | |
| SFE_Veg_RiparianPerennialBuffer.lyr | S_R03_SFE.Vegetation | S_R03_SFE.RiparianPerennialBuffer | This riparian layer was created by buffering the waterbody polygons (CFF), NHD water points that were springs, and the streams 100 feet. | |
| SFE_Veg_TESPlant_OccurrenceAll.lyr | S_USA.TESP | S_USA.TESP_OccurrenceAll | This includes all Threatened, Endangered and Sensitive Plant sites collected by the National TESP Inventory Protocol. | edwdb.fs.fed.us / sde:oracle9i SDE.DEFAULT |
| SFE_VisitorMap.lyr | (Raster)- not in SDE | SFE_VisitorMap.sid; Mask | Scanned Visitor Map | T:\FS\Reference\GIS\03_sfe\ Data\Raster\VisitorMap\ |
| SFE_VisitorMap_BlackWhite.lyr | (Raster)- not in SDE | SFE_VisitorMap_East_BlackWhite.tif; West | | T:\FS\Reference\GIS\03_sfe\ Data\Raster\VisitorMap\ |
| SFE_VisitorMap_East.lyr | (Raster)- not in SDE | SFE_VisitorMap_East.sid | | T:\FS\Reference\GIS\03_sfe\ Data\Raster\VisitorMap\ |
| SFE_VisitorMap_Relief.lyr | (Raster)- not in SDE | SFE_VisitorMap_Relief.sid; Mask | | T:\FS\Reference\GIS\03_sfe\ Data\Raster\VisitorMap\ |
| SFE_VisitorMap_West.lyr | (Raster)- not in SDE | SFE_VisitorMap_West.sid | | T:\FS\Reference\GIS\03_sfe\ Data\Raster\VisitorMap\ |
| SFE_Water_Body.lyr | S_R03_SFE.Water | S_R03_SFE.Water_Body | This feature depicts both perennial and intermittent water bodies as polygons on the Santa Fe NF (areas that cover more than 50 feet on the ground). | |
| SFE_Water_HUC4.lyr | S_R03_SFE.Water | S_R03_SFE.Hydrologic_Unit_4th_Code | This data set is a complete digital hydrologic unit boundary layer to the Watershed (10-digit) 4th, 5th, and 6th level for the entire United States. | |
| SFE_Water_HUC5.lyr | S_R03_SFE.Water | S_R03_SFE.Hydrologic_Unit_5th_Code | | |
| SFE_Water_HUC6.lyr | S_R03_SFE.Water | S_R03_SFE.Hydrologic_Unit_6th_Code | | |
| SFE_Water_ImpairedStream.lyr | S_USA_NM.Water | S_USA_NM.NMED303d_2010; S_USA_NM.NMED305b_2010 | Impaired Streams | edwdb.fs.fed.us / sde:oracle9i SDE.DEFAULT |
| SFE_Water_NHD_Point.lyr | S_R03_SFE.Water | S_R03_SFE.NHD_Point | The National Hydrography Dataset (NHD) is a feature-based database that interconnects and uniquely identifies the stream segments or reaches that make up the nation's surface water drainage system. | |
| SFE_Water_Point.lyr | S_R03_SFE.Water | S_R03_SFE.Water_Point | Groundwater springs and seeps on the Santa Fe NF | |

Appendix 1 – Forest Plan Monitoring and Evaluation Report, Santa Fe National Forest, FY12

| Layer File Name | SDE Feature Dataset | SDE Feature Class Name | Description | Other Location |
|---|----------------------|--------------------------------------|--|--|
| SFE_Water_StreamName.lyr | S_R03_SFE.Water | S_R03_SFE.Stream_Route | This feature class depicts all water drainages within the Santa Fe NF. | |
| SFE_Water_StreamType.lyr | S_R03_SFE.Water | S_R03_SFE.Stream_arc | This feature class depicts drainages with CFF codes (cartographic feature files) defining perennial and intermittent streams | |
| SFE_Wilderness_PecosMap.lyr | (Raster)- not in SDE | PecosWilderness.sid | Pecos Wilderness | T:\FS\Reference\GIS\r03_sfe\Data\Raster\WildernessMap\ |
| SFE_Wildlife_AmericanMartenSurvey.lyr | S_R03_SFE.Wildlife | S_R03_SFE.AmericanMartenSurvey | Areas surveyed for pine martens. | |
| SFE_Wildlife_ElkCalvingArea.lyr | S_R03_SFE.Wildlife | S_R03_SFE.ElkCalvingArea | Elk calving areas | |
| SFE_Wildlife_ElkCrucialSummerRange.lyr | S_R03_SFE.Wildlife | S_R03_SFE.ElkCrucialSummerRange | Crucial Summer Range: That part of the mid-June to mid-August summer range where elk concentrations are about double (200 percent) the surrounding elk densities. | |
| SFE_Wildlife_ElkCrucialWinterRange.lyr | S_R03_SFE.Wildlife | S_R03_SFE.ElkCrucialWinterRange | Crucial Winter Range: That part of the winter range where 90 percent of the individuals are located when the annual snowpack is at its maximum and/or temperatures are at a minimum in the two worst winters out of ten. | |
| SFE_Wildlife_ElkSummerRange.lyr | S_R03_SFE.Wildlife | S_R03_SFE.ElkSummerRange | Summer Range: That part of the overall range where 90 percent of the individuals are traditionally located between spring green-up and the first heavy snowfall. | |
| SFE_Wildlife_ElkWinterRange.lyr | S_R03_SFE.Wildlife | S_R03_SFE.ElkWinterRange | Winter Range: That part of the overall range where 90 percent of the individuals are located during the average five winters out of ten from the first heavy snowfall to spring green-up. | |
| SFE_Wildlife_GoshawkForagingArea.lyr | S_R03_SFE.Wildlife | S_R03_SFE.GoshawkForagingArea | Foraging areas are drawn around nest sites taking in appropriate habitat encompassing the nest area for a total of about 6,000 acres. | |
| SFE_Wildlife_GoshawkManagementArea.lyr | S_R03_SFE.Wildlife | S_R03_SFE.Goshawk_pl | Goshawk management areas on the Santa Fe NF | |
| SFE_Wildlife_GoshawkReplacementNestSite.lyr | S_R03_SFE.Wildlife | S_R03_SFE.GoshawkReplacementNestSite | As per the SFNF Forest Plan, three nest areas and three replacement nest areas (~30acres) are to be designated within each post-fledgling family area | |
| SFE_Wildlife_GoshawkSurvey.lyr | S_R03_SFE.Wildlife | S_R03_SFE.GoshawkSurvey | Northern goshawk survey call points and calling routes were combined and buffered by 0.25 miles to approximate the actual area called. | |
| SFE_Wildlife_JMS_ConservationArea.lyr | S_R03_SFE.Wildlife | S_R03_SFE.JMS_ConservationArea | Areas of Jemez Mountains Salamander habitat to be protected or surveyed | |
| SFE_Wildlife_JMS_OccupiedStand.lyr | S_R03_SFE.Wildlife | S_R03_SFE.JMS_OccupiedStand | Vegetation Stands that have had positive results in Salamander surveys that have been conducted | |
| SFE_Wildlife_JMS_SurveyNegative.lyr | S_R03_SFE.Wildlife | S_R03_SFE.JMS_SurveyNegative | These points denote areas searched for Jemez Mountains Salamander with negative results | |
| SFE_Wildlife_JMS_SurveyPositive.lyr | S_R03_SFE.Wildlife | S_R03_SFE.JMS_SurveyPositive | Areas searched for Jemez Mountains Salamander with positive results | |

Appendix 1 – Forest Plan Monitoring and Evaluation Report, Santa Fe National Forest, FY12

| Layer File Name | SDE Feature Dataset | SDE Feature Class Name | Description | Other Location |
|--------------------------------------|-------------------------|---------------------------------------|---|---|
| SFE_Wildlife_JumpingMouseHabitat.lyr | S_R03_SFE.Wildlife | S_R03_SFE.JumpingMouseHabitat | TEUs pertaining to wet meadows which indicate potential habitat for New Mexico meadow jumping mouse | |
| SFE_Wildlife_MSO_CriticalHabitat.lyr | S_R03_SFE.Wildlife | S_R03_SFE.MSO_CriticalHabitat | Mexican Spotted Owl critical habitat units in its canyon and forest habitats | |
| SFE_Wildlife_MSO_PAC.lyr | S_R03_SFE.Wildlife | S_R03_SFE.MSO_PAC | Boundaries of Mexican spotted owl management areas, or protected activity center (PAC) | |
| SFE_Wildlife_MSO_RestrictedArea.lyr | S_R03_SFE.Wildlife | S_R03_SFE.MSO_RestrictedArea | Boundaries of protected Mexican Spotted Owl habitat on the Santa Fe NF | |
| SFE_Wildlife_PeregrineFalconZone.lyr | S_R03_SFE.Wildlife | S_R03_SFE.PeregrineFalconZone | Zones were created around peregrine falcon nesting areas, based on potential for disturbance to nesting falcons | |
| SFE_Wildlife_Observation_Polygon.lyr | S_USA.Fish_and_Wildlife | S_USA.FishWildlife_Observation | Wildlife observations | infraweb1.fs.usda.gov FS_PUBLIC_READ 5152:SDE SDE.DEFAULT |
| SFE_Wildlife_Observation_Point.lyr | S_R03_SFE.NRIS_Wildlife | S_R03_SFE.NRIS_WildlifeObservation_Pt | The NRIS Survey feature class provides survey attribute and location data from NRIS Aquatic Surveys, and Threatened, Endangered and Sensitive Plant Surveys | IWEBDB FS_PUBLIC_0310 sde:oracle11g/:SDE SDE.DEFAULT |
| SFE_Wildlife_Site_Point.lyr | S_R03_SFE.NRIS_Wildlife | S_R03_SFE.NRIS_WildlifeSite_Pt | | IWEBDB FS_PUBLIC_0310 sde:oracle11g/:SDE SDE.DEFAULT |
| SFE_Wildlife_Site_Polygon.lyr | S_R03_SFE.NRIS_Wildlife | S_R03_SFE.NRIS_WildlifeSite_PI | | IWEBDB FS_PUBLIC_0310 sde:oracle11g/:SDE SDE.DEFAULT |

Appendix 2: Los Posos Monitoring Report

This report provides an example of the type of post vegetation treatment (mechanical thinning and burning) monitoring is conducted on treatment areas.

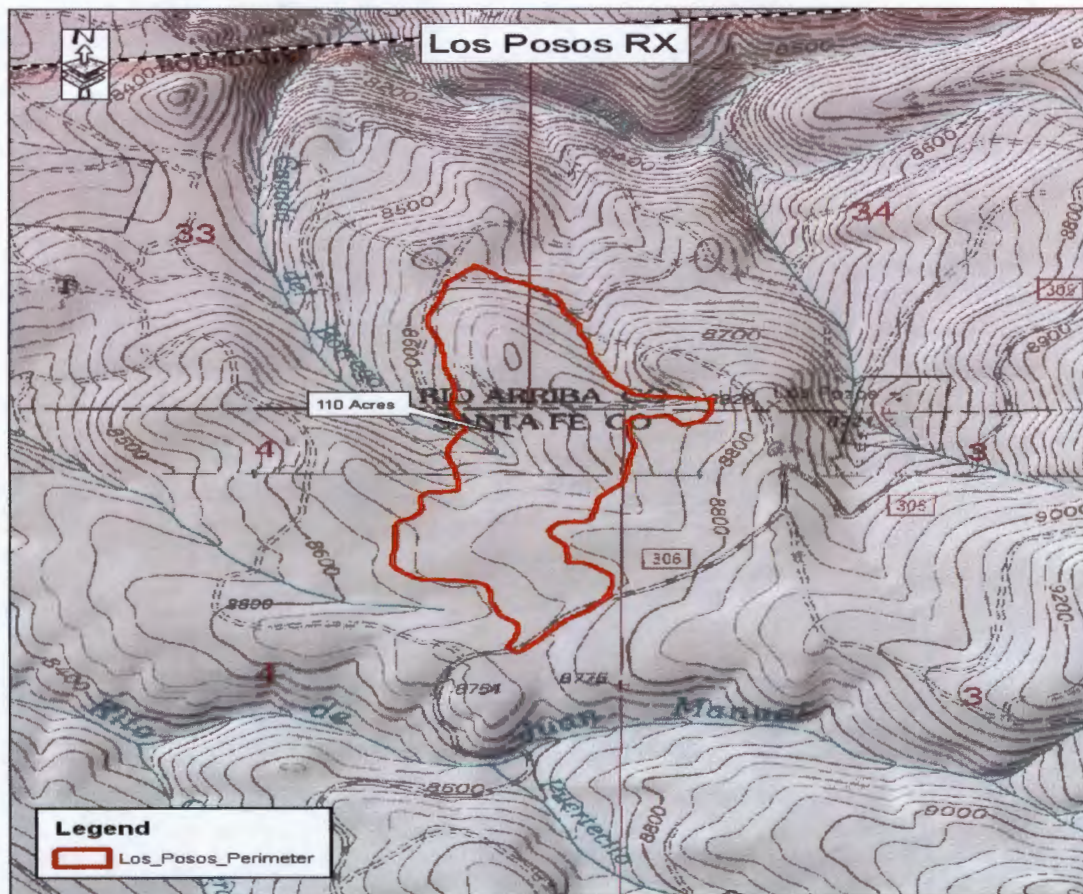
Narrative

The Los Posos Fuel Wood Unit was mechanically thinned in 2009 by a contracting outfit based out of Albuquerque N.M. This monitoring report will cover the pre and post burn effects of the Los Posos Fuel Wood Unit. The pre and post burn photos will be compared to the "Photo Series for Quantifying Residues in the Southwestern Region", to determine if the objectives outlined in the Los Posos Prescribed Fire Burn Plan were achieved.

Bun Plan Goals and Objectives

Provide and restore the forest to a productive state to provide for the future health of the forest.

Prescribed fire will be used to restore vegetative diversity, wildlife benefits and hazardous fuels reduction.



Pre-Burn Photo #1



Fuel loading for Pre-Burn Photo #1

Photo Series Data (page 32)

1hr fuel: .12 (tons per acre)

10hr fuel: 2.0 (tons per acre)

100hr fuel: 3.2 (tons per acre)

1000hr fuel: 2.9 (tons per acre)

Post-Burn Photo #1



Fuel loading for Post-Burn Photo #1

Photo Series Data Sheet (page 215) *1hr fuel reduction was estimated due to inadequate depiction of 1 hr fuels in the photo series for post-burn results*

*1hr fuel: .02 (tons per acre)

10hr fuel: .7 (tons per acre)

100hr fuel: .4 (tons per acre)

1000hr fuel: .9 (tons per acre)

Range of acceptable results and post-burn fuel reduction percentage

Burn Plan Objectives

Post-Burn Effects

Reduce 1 hour fuels 50-90%

Reduction of 84%

Reduce 10 hour fuels 50-90%

Reduction of 65%

Reduce 100 hour fuels 25-75%

Reduction of 88%

Reduce 1000 hour fuels 10-50%

Reduction of 69%

Conclusion

The Los Posos Prescribed Burn met the range of acceptable results for the fuels reduction objectives outlined in the burn plan.



